

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

1. (Currently amended) A manufacturing method of a silicon wafer, including:

an etching process (14) storing acid etching solution and alkali etching solution in plural etching tanks, respectively, and immersing a silicon wafer gone through a lapping process and having degraded superficial layers in the acid etching solution and the alkali etching solution in order so as to remove the degraded superficial layers;

a double surface polishing process (16) to simultaneously polish the front and rear surfaces of said wafer after said etching process;

wherein the acid etching solution includes hydrofluoric acid, nitric acid, acetic acid, and water, respectively,

wherein, when the resistivity of the silicon wafer is below $1 \Omega \cdot \text{cm}$, the mixing ratio of hydrofluoric acid, nitric acid, acetic acid, and water is hydrofluoric acid: nitric acid: acetic acid: and water = 1:1 to 5:3 to 8:3 to 7 by percent by weight,

wherein, when the resistivity of the silicon wafer is above $1 \Omega \cdot \text{cm}$, the mixing ratio of hydrofluoric acid, nitric acid, acetic acid, and water is hydrofluoric acid: nitric acid: and water = 1:5 to 9:1 to 6:1 to 5 by percent by weight,

wherein a total removal depth in the acid etching is 5 to 7 μm ,

wherein sodium hydroxide aqueous solution of 40 to 60 percent by weight is used in the alkali etching solution of said etching process (14), and

wherein a total removal depth in the alkali etching is 13 to 15 μm .

wherein, in said double surface simultaneous polishing process (16), a flow rate of abrasive supplied to the wafer is made 1 to 20 L/min, a loading capacity of an upper lapping plate is made 50 to 500 g/cm², and a ratio of a lower lapping plate number of rotations to the upper lapping plate number of rotations is taken as the upper lapping plate: the lower lapping plate = 1:2 to 20, thereby making a polishing removal depth A in said wafer front surface is made 5 to 10 μm , and

[[a]] making a polishing removal depth B in said rear surface is made 2 to 6 μm , and making a difference (A-B) between said polishing removal depth A and said polishing removal depth B is made 3 to 4 μm .

2. (Original) The manufacturing method according to claim 1, wherein the etching process is performed by the alkali etching after the acid etching.
3. (Original) The manufacturing method according to claim 1, wherein the number of acid etching tanks is made 1 to 3, and the number of alkali etching tanks is made 1 to 3.

Claims (4-6) Cancelled.